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THOMAS A. ROE INSTITUTE FOR ECONOMIC POLICY STUDIES

About the Author

David R. Burton is Senior Fellow in Economic Policy in the Thomas A. Roe Institute for Economic Policy Studies at The Heritage Foundation. The author would like to express gratitude to Rachel Greszler for her ideas and recommendations regarding apprenticeship and other employment policy matters.

End the War on Manufacturing: An Agenda to Restore Industrial Production in the United States

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Federal, state, and local governments' policies harm businesses in industries that produce goods. While manufacturing output has not appreciably declined, manufacturing employment has fallen substantially. Manufacturing and other production has migrated within the United States from jurisdictions that have a hostile business climate to those jurisdictions that welcome such businesses. Government policies should not encourage production to move overseas or reduce opportunities and wages in the United States. Better tax policy; permitting reform; improved labor and employment laws; better training and apprenticeships; better energy, environmental, and land-use policies; measures to reduce supply-chain costs; and reduced health care costs would bring manufacturing and other production back to the United States.

Federal, state and local governments have adopted, at an accelerating pace, a wide variety of policies that harm industries that produce goods, including manufacturing, energy production, mining, agriculture, and construction. This, in turn, means that many relatively high-paying jobs in these sectors have either been lost or were never created and, in some cases, that the U.S. has become dangerously reliant on geopolitical adversaries for critical materials or goods.[1]

There is also a non-economic and politically salient dimension to this problem that is unrelated to national security. When manufacturing plants, mines, or oil and gas wells close, the cascading economic effects can have a devastating long-term impact on the social fabric in small communities because of the adverse impact of the closures on employment, small businesses, property values, and the local government tax base.

Yet it is also the case that during the first Trump Administration (in September 2018, to be precise) real industrial production[2] reached the highest

level in American history[3] and that the U.S. economy generally remains more innovative and dynamic than other developed economies. Among developed countries, the U.S. share of manufacturing has been increasing since 2011 and now stands at about one-third.[4] One of the reasons for this is that the United States, for now, has less destructive policies than most European countries. The constant thrust of Obama and Biden Administration policies and of countless state and local governments, however, were to adopt European-type policies. Such policies have had a pronounced adverse effect on the American people as they are implemented.[5] Many of the worst policies were finalized by the Biden Administration but have not yet been implemented.

There are three basic reasons for the perceived decline of manufacturing and other goods-producing industries. *First,* those industries have become dramatically more efficient and produce more goods with substantially fewer employees. While manufacturing output has not appreciably declined, manufacturing employment *has* fallen substantially. Moreover, manufacturing employment as a share of all employment has also declined dramatically. This manufacturing productivity increase is analogous to the incredible increase in agricultural productivity and the concomitant decline in farming employment during the 20th century.[6]

Between 1910 and 2000, agricultural employment in the U.S. dropped by nearly 80 percent even though the population increased by about 200 percent and agricultural output increased more than 300 percent.[7] Productivity gains like those seen in agriculture and manufacturing are why the American people have a higher standard of living than their ancestors and modern Americans live better than those in other, less productive countries. Real wages[8] are closely related to productivity over extended periods.[9] Policymakers should not adopt policies that have an adverse effect on U.S. productivity improvements.

Second, there has been a notable migration of manufacturing and other production *within* the United States from jurisdictions that have a hostile business climate to those that welcome such businesses. For those that live in jurisdictions actively seeking to make manufacturing there less attractive, this is painful and dispiriting. The solution is to change the counterproductive state and local policies or, as many Americans are doing, to move. States such as New York, Illinois, and California now have substantial population out-migration,[10] and manufacturers have followed.

Third, the relocation of some kinds of manufacturing abroad has had an important impact. The U.S. share of worldwide and developed world[11] manufacturing did decline markedly between 2000 and 2010. The U.S. share of worldwide manufacturing has been stable since 2011, and the U.S. share of developed world manufacturing has increased substantially since 2011. At

the same time, the Chinese share of world manufacturing has skyrocketed from 3 percent in 1990 to 44 percent in 2022.[12]

Governments should not adopt policies that encourage production to move overseas or that reduce opportunity and wages in the United States. That, unfortunately, is precisely what the federal government and many state and local governments are doing. The sheer size, scope, and intrusiveness of the regulatory state has an adverse impact on manufacturers, their employees, and their customers. A recent study by the National Association of Manufacturers estimates that federal regulations cost an estimated $12,800 *per employee* per year in 2022.[13] Small firms with fewer than 50 employees incur regulatory costs of $14,700 per employee per year.[14] This is money diverted from compensating employees, acquiring new productivity-enhancing capital equipment and technologies, and reducing consumer prices.

Neither, however, should governments be in the business of picking economic winners and losers among industries, subsidizing politically favored businesses, allocating capital, or running enterprises (as the Biden Administration did with the CHIPS Act[15] and the Inflation Reduction Act.[16]) Government has an extremely poor record of doing so because such decisions are usually motivated by politics, lobbying clout, and crony capitalism rather than by economic or business considerations or the public interest. Moreover, politicians and government bureaucrats simply do not have the information or skills to effectively make such choices. Crony capitalism, where government grants preferences to one type of industry and one set of workers over another, has a long record of being an expensive failure.[17] Markets, relying on decision-making by millions of free people all over the country, have a demonstrably better record at creating prosperity and meeting people's needs and wants than do bureaucrats and politicians.[18]

This *Special Report* makes 28 specific policy recommendations about how to make manufacturing and other production more attractive in the United States.

The Facts About Manufacturing

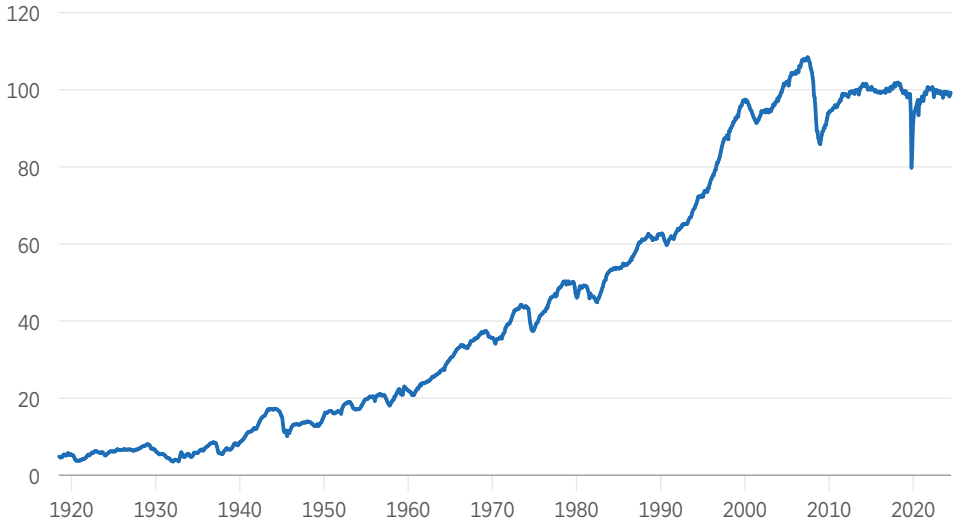
Certain core facts should inform any discussion about U.S. manufacturing. These are summarized here, with additional discussion below.

- Industrial output has steadily increased for the past century, reaching record levels under the first Trump Administration. Manufacturing output has steadily increased over the past one hundred years, peaking in 2007, and stood at 91 percent of the record level as of 2023.

CHART 1

Real Industrial Production

INDUSTRIAL PRODUCTION, MANUFACTURING (INDEX 2017=100)



SOURCE: Federal Reserve Bank of St. Louis, "Industrial Production: Manufacturing (SIC)," https://fred.stlouisfed.org/series/IPMANSICS (accessed February 5, 2025).

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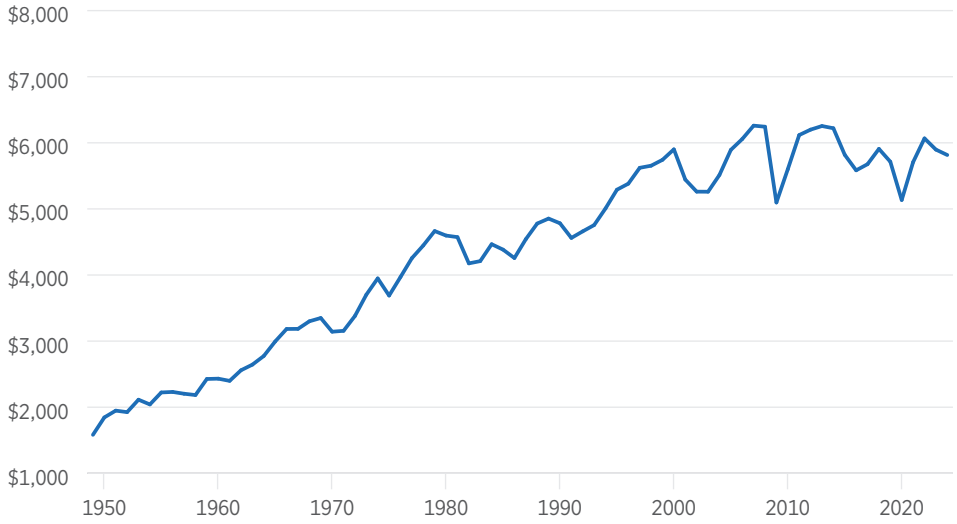
- Manufacturing employment was generally stable from 1968 to 2000, declined dramatically from 2000 to 2009, and has been gradually increasing since 2010.
- Manufacturing employment as a share of overall employment has declined steadily since World War II.
- There has been substantial relocation of manufacturing within the U.S. primarily due to business-climate considerations.
- The U.S. share of manufacturing among developed countries has been increasing since 2011 and now accounts for about 33 percent of Organization for Economic Co-operation and Development (OECD) manufacturing (the highest figure since 1985). The U.S. share of world manufacturing has been nearly stable at 15 percent to 17 percent since 2011 and currently stands at 16 percent. The Chinese share of world manufacturing has skyrocketed from 3 percent in 1990 to 44 percent in 2022.

CHART 2

Real Manufacturing Ouput

IN BILLIONS OF INFLATION-ADJUSTED DOLLARS



SOURCE: U.S. Bureau of Economic Analysis, "Gross Output by Industry," https://www.bea.gov/data/industries/gross-output-by-industry (accessed April 11, 2025).

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- Manufacturing wages are 13 percent higher than the average private-sector wage, but substantially lower than many industries (utilities, information and communications, mining and logging, finance, professional and business services, construction, and wholesaling). The primary reason for manufacturing wages being higher than average wages is the relatively low wages in the retail, leisure, and hospitality industries. The pay variance among occupations within manufacturing is very large.

Industrial Production and Manufacturing Output. Industrial production is a broader concept than manufacturing production or manufacturing output. It includes mining, quarrying, oil and gas extraction, and electric and gas utility output, in addition to manufacturing. The highest industrial output in the United States history in real (inflation-adjusted) terms occurred in September of 2018. As of the end of 2023, industrial production was 98.4 percent of the level reached in 2018.[19]

CHART 3

Manufacturing Employment

SOURCE: Federal Reserve Bank of St. Louis, "All Employees, Manufacturing," https://fred.stlouisfed.org/series/MANEMP (accessed February 5, 2025).

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Real manufacturing output peaked in 2007 but remains relatively stable at 91 percent of record levels in 2023.

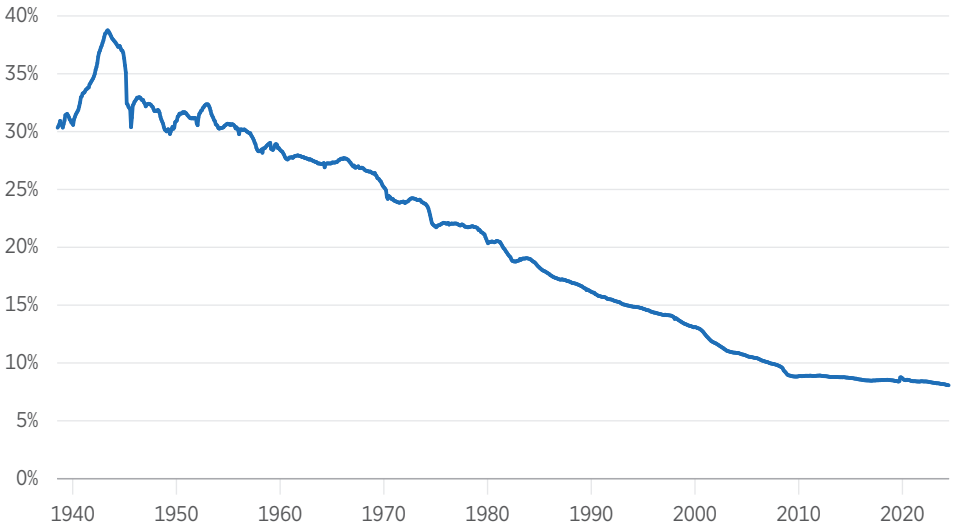
Manufacturing Employment. Manufacturing employment, with some fluctuation, was relatively stable from 1968 to 2000. As discussed below, this means that manufacturing employment as a share of all employment was steadily declining because the economy and number of employees economy-wide continued to grow.

Between 2000 and 2009, however, the number of manufacturing employees decreased dramatically. Manufacturing employment fell from 17.2 million in October 2000 to 11.5 million in October 2009, or by 33 percent. Since 2010, the number of people employed in manufacturing has gradually increased. As of February 2024, manufacturing employment was 13 million.

Manufacturing employment as a share of all employment has been in steady decline since the end of World War II, from 37 percent in 1945 to 8 percent in 2023. Only during the Korean War was this decline reversed to

CHART 4

Manufacturing Employees as a Percentage of All Employees



SOURCE: Federal Reserve Bank of St. Louis, "All Employees, Manufacturing/All Employees, Total Nonfarm," https://fred.stlouisfed.org/graph/?g=cAYh (accessed February 5, 2025).

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any significant extent. During the first Trump Administration, the decline was stopped but not reversed.

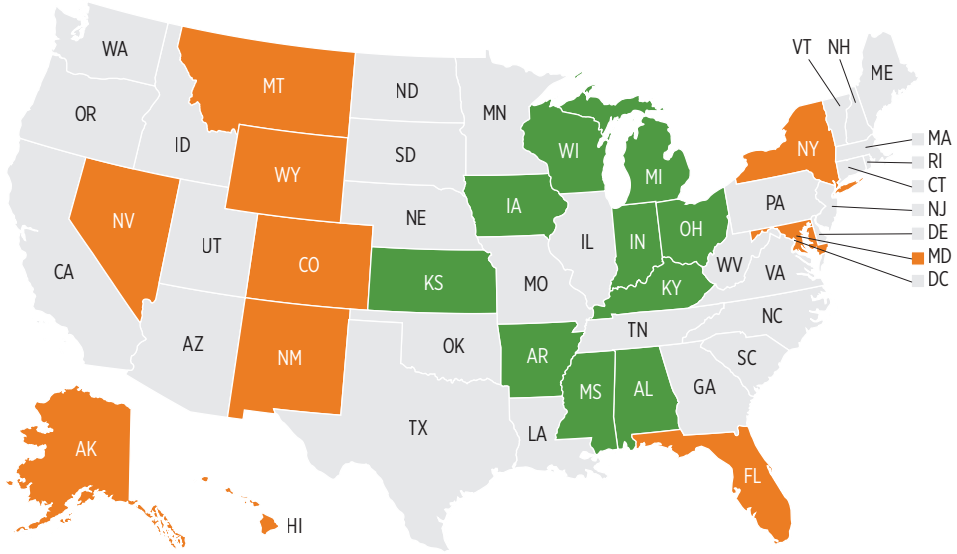
Manufacturing and Production Employment Share by State. The states where manufacturing is disproportionately important include a number of states that may surprise some. Alabama, Arkansas, Iowa, Kansas, Kentucky, and Mississippi are in the top 10 states for manufacturing employment as a share of total employment. States once associated with manufacturing, including Maryland and New York, are now in the bottom 10. This reflects the substantial relocation *within* the United States of manufacturing from jurisdictions like New York and Maryland that have hostile business climates to those with more favorable business climates.[20]

Once broader production is considered by adding mining, logging, and construction to manufacturing, New York drops to last place and Idaho, Utah, and Wyoming enter the top 10. Iowa, Indiana, and Wisconsin remain at the top.[21]

MAP 1

Manufacturing—Top 10, Bottom 10 States

MANUFACTURING EMPLOYMENT AS A PERCENTAGE OF TOTAL NON-FARM EMPLOYMENT, DECEMBER 2024



TOP 10	
Arkansas	11.7%
Kansas	11.9%
Mississippi	12.1%
Ohio	12.3%
Kentucky	12.7%
Alabama	13.1%
Michigan	13.6%
Iowa	14.2%
Wisconsin	15.9%
Indiana	16.3%

BOTTOM 10	
Hawaii	2.0%
New Mexico	3.3%
Wyoming	3.6%
Alaska	3.9%
Maryland	4.0%
Montana	4.2%
New York	4.3%
Florida	4.3%
Nevada	4.4%
Colorado	5.0%

SOURCE: U.S. Bureau of Labor Statistics, "Industry Employment by State, Seasonally Adjusted," https://www.bls.gov/charts/state-employment-and-unemployment/industry-employment-by-state.htm (accessed February 5, 2025).

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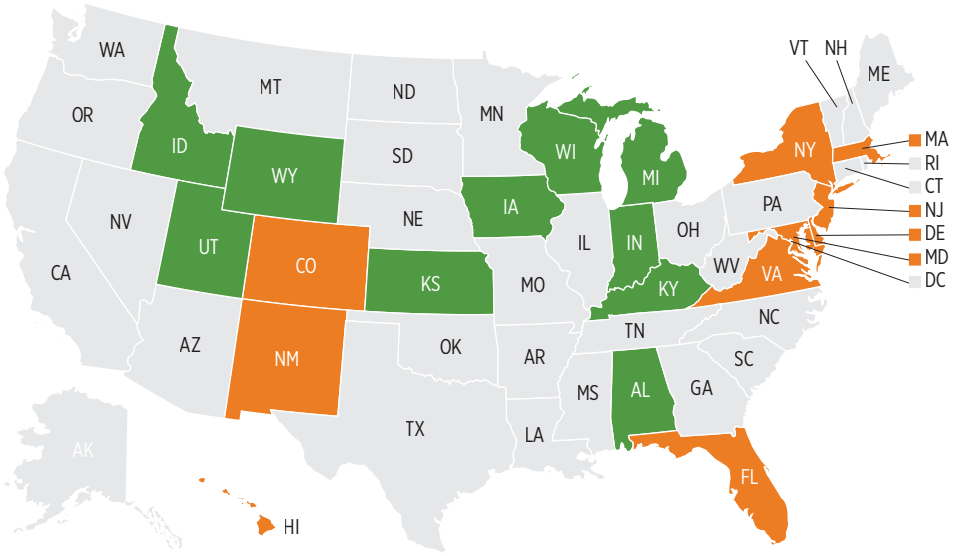
U.S. Manufacturing Compared to World and OECD Manufacturing. Compared to other OECD-member economies, the U.S. manufacturing sector has performed strongly since 2011 and now accounts for 33 percent of all OECD manufacturing, the highest percentage since 1985.[22] (See Chart 5.) The U.S. share of global manufacturing is 16 percent and has varied little since 2011. As recently as 2002, however, the U.S. share of global manufacturing was 25 percent.[23]

MAP 2

Mining, Logging, Construction, and Manufacturing—Top 10, Bottom 10 States

MINING, LOGGING, CONSTRUCTION AND MANUFACTURING EMPLOYMENT AS A PERCENTAGE OF TOTAL NON-FARM EMPLOYMENT, DECEMBER 2024



TOP 10	
Kansas	17.1%
Wyoming	17.1%
Utah	17.4%
Kentucky	17.6%
Idaho	17.8%
Michigan	18.1%
Alabama	18.3%
Iowa	19.8%
Wisconsin	20.6%
Indiana	21.6%

BOTTOM 10	
New York	8.2%
Hawaii	8.3%
New Jersey	9.7%
Maryland	9.7%
Delaware	10.5%
Florida	10.9%
Massachusetts	11.0%
Virginia	11.3%
Colorado	11.9%
New Mexico	12.0%

SOURCE: U.S. Bureau of Labor Statistics, "Industry Employment by State, Seasonally Adjusted," https://www.bls.gov/charts/state-employment-and-unemployment/industry-employment-by-state.htm (accessed February 5, 2025).

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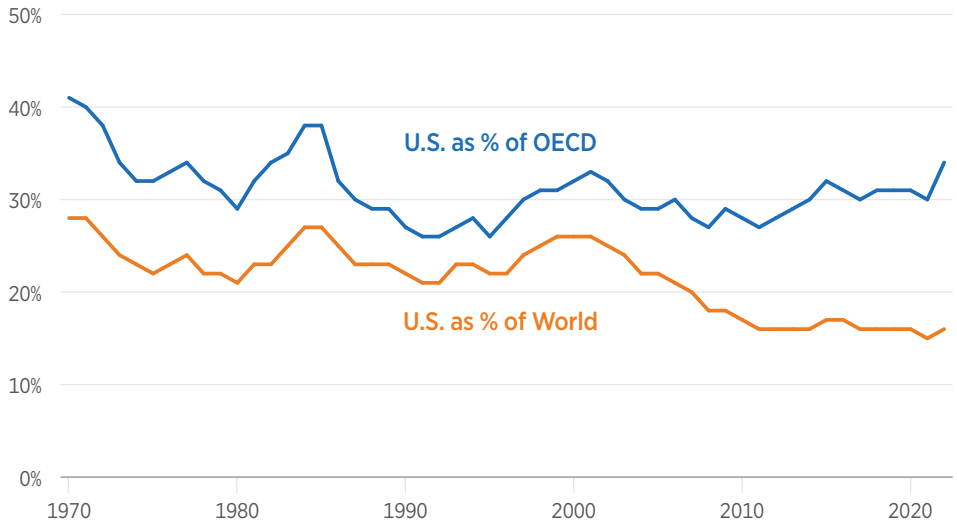
Chinese Manufacturing. The Chinese share of world manufacturing has skyrocketed from 3 percent in 1990 to 44 percent in 2022. Some of this is a function of substantial economic liberalization and the development of private enterprise that began in 1978 but accelerated in the 1990s. China's entry into the World Trade Organization in December 2001 played a crucial role.

CHART 5

U.S. Manufacturing Output as a Percentage of World and OECD



SOURCE: U.N. Trade and Development, "Gross Domestic Product, GDP by Type of Expenditure, VA by Kind of Economic Activity, Total and Shares, Annual," https://unctadstat.unctad.org/datacentre/dataviewer/US.GDPComponent (accessed February 5, 2025).

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Are Manufacturing Wages Higher?

There is a perception that wages are higher for those who work in manufacturing than in other industries. Indeed, average manufacturing wages are 13 percent higher than the *average* private-sector wage. As of March 2024, the average annual wage in the private sector is $62,054, and the average annual wage in manufacturing is $69,950. Manufacturing wages are notably lower than many other industries (utilities, information and communications, mining and logging, finance, professional and business services, construction, and wholesaling) and markedly higher than the retail, leisure, and hospitality industries. (See Table 2).

There are, however, extremely large differences by occupation hidden by these averages. For example, within the manufacturing industry, woodworking machine operators earn $40,120 annually; general production workers $43,720; electricians $69,160; industrial engineers $99,300; and

TABLE 1

U.S. and China Manufacturing as a Percentage of Global Manufacturing, 1970–2022

	1970	1980	1990	2000	2010	2020	2022
U.S.	28%	21%	22%	26%	17%	16%	16%
China	4%	5%	3%	9%	26%	42%	44%
U.S. + China	32%	26%	25%	35%	43%	58%	60%

SOURCE: U.N. Trade and Development, "Gross Domestic Product: GDP by Type of Expenditure, VA by Kind of Economic Activity, Total and Shares, Annual," last updated February 16, 2024, https://unctadstat.unctad.org datacentre/dataviewer/US.GDPComponent (accessed March 3, 2025).

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aerospace engineers $135,950.[24] General production workers[25] earn only 70 percent of the average U.S. wage.[26]

Does Manufacturing Matter? Manufacturing matters. The U.S. must have an adequate defense industrial base to potentially wage war in a great power conflict.[27] It must be able to supply its armed forces (and historically, arm its allies) with either domestic production or production from allies. The war in Ukraine has made it evident that current U.S. and allied defense industrial bases are lacking. Moreover, the U.S. economy should not be dependent on geopolitical rivals for critical supply-chain components.[28] Various problems that arose during the COVID-19 pandemic highlighted some of these vulnerabilities. Specifically, the U.S. needs to have adequate domestic (or allied) sources of food,[29] semiconductors, rare-earth minerals, pharmaceuticals, information and communications technology devices, energy sources and energy production,[30] and transportation equipment.

Beyond non-economic considerations, the question becomes not whether manufacturing matters but whether manufacturing matters *more* than other industries. And the answer to that question is no. Government should not favor one industry or one set of workers over another. It should not tell the American people in which industry they should work or what they should buy with the money that they earn. Nor should it disfavor a particular industry or group of workers. In 1900, 37.9 percent of the national labor force consisted of agricultural workers.[31] If government had forced (by taxing, spending, or regulations) the farm labor share to remain constant, America would not have become a dominant manufacturer up through the 1950s. If government had forced (by taxing, spending, or regulations) the

TABLE 2

Employment and Average Weekly Earnings by Industry for All Employees, March 2024

Industry	Average Weekly Earnings	Annual Earnings	Annual Earnings as Percentage of Average Private Earnings	Employment in Thousands	Employment (Percentage of Total)
Utilities	$2,139	$111,233	179%	588	0.4%
Information	$1,806	$93,913	151%	3,017	2.2%
Mining and logging	$1,775	$92,307	149%	645	0.5%
Financial activities	$1,701	$88,434	143%	9,226	6.8%
Professional and business services	$1,521	$79,109	127%	22,954	17.0%
Construction	$1,486	$77,248	124%	8,211	6.1%
Wholesale trade	$1,471	$76,469	123%	6,158	4.6%
Manufacturing	$1,345	$69,950	113%	12,956	9.6%
Transportation and warehousing	$1,173	$61,002	98%	6,541	4.9%
Private education and health services	$1,123	$58,404	94%	26,101	19.4%
Other services	$1,003	$52,168	84%	5,901	4.4%
Retail trade	$726	$37,733	61%	15,660	11.6%
Leisure and hospitality	$558	$29,039	47%	16,905	12.5%
Total private	**$1,193**	**$62,054**	**100%**	**134,863**	**100%**

SOURCE: U.S. Bureau of Labor Statistics, "Employment and Average Weekly Earnings by Industry," March 2024, https://www.bls.gov/charts/employment-situation/employment-and-average-weekly-earnings-by-industry-bubble.htm# (accessed February 5, 2025).

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manufacturing labor share to remain constant, America would not have become a leader in professional and nonprofessional service industries through the 2000s. But regardless of what one thinks of the wisdom of government favoring certain industries, at the moment, a wide array of policies actively *penalize* industrial production in the United States and cause production to move outside the U.S.

An Accurate Diagnosis of the Problem

As discussed above, manufacturing is stronger than is generally understood, but it can be better. Production is strong and near record levels, but

those records should have been broken. The U.S. share of manufacturing output is growing relative to other developed countries and its share of worldwide manufacturing has been stable since 2011—when it should have been growing. Manufacturing employment, however, is down dramatically compared to levels prior to 2000, in part because of productivity gains, but has gradually increased since 2010.

The Biden Administration's labor and employment, energy, environmental, land use, and trade policies seriously harmed manufacturing, mining, energy, logging, and agriculture. The Trump Administration has taken initial steps to reverse these policies. First, President Trump rescinded eight Biden Administration executive orders and memoranda that had an adverse impact on manufacturing and energy production.[32] Second, President Trump issued four executive orders that will improve energy production in the United States.[33]

A host of existing policies can be improved to attract manufacturing and other production back to the United States. The remainder of this *Special Report* explores policies that can promote the production of goods in the United States. The issues examined include: (1) tax policy; (2) permitting reform; (3) labor and employment laws, training, and apprenticeships; and (4) supply-chain costs. This *Special Report* also discusses the importance of energy, environmental, and land-use policies and provides a brief outline of possible improvements. It also discusses the magnitude and importance of health care costs to U.S. competitiveness but does not address specific reforms. A summary of the policy recommendations is provided near the conclusion.

Tax Policy

The U.S. income tax system harms U.S. production by:

- Raising the cost of capital used to acquire productive equipment or to build factories in the U.S. while exempting foreign production from any meaningful tax burden;
- Imposing high tax rates on businesses that produce goods in the U.S.;
- Imposing onerous compliance costs on U.S. firms;
- Discouraging research and experimentation in the U.S.; and
- Discouraging businesses from locating their headquarters in the U.S.

Although the 2017 tax bill[34] made substantial permanent and temporary improvements, by reducing marginal tax rates and reducing distortions, the tax system remains biased against manufacturing and has been since 1986. This needs to change.

Capital Cost Recovery. The U.S. tax system is biased against manufacturing and other capital-intensive industries. The U.S. tax code denies businesses the ability to deduct the full cost of purchasing machinery, equipment, or structures at the time businesses do so. Instead, the tax code applies a cumbersome depreciation system[35] that forces businesses to deduct the cost of buying machinery, equipment, or structures over many years. For most nonresidential real property, such as a factory, the recovery period is 39 years. The IRS publication explaining this system is 111 pages long.[36] Every business that owns machinery, equipment, or structures must grapple with this complex system.

The U.S. has one of the worst tax capital cost recovery systems in the industrialized world. It currently ranks 21st overall among developed countries and 32nd for industrial structures (out of 38).[37] This ranking will rapidly deteriorate once the 2017 improvements to capital cost recovery allowances are entirely phased out at the end of 2026.[38]

Because of the time value of money, a tax deduction for the cost of purchasing a machine or building 10, 20, or 39 years from now is markedly less valuable than a tax deduction for the cost of the building or machine now.[39] By delaying the deduction for these costs, the tax system substantially raises the user cost of capital and is biased against investment.[40] It makes investment in manufacturing facilities in the U.S. less attractive. Less investment due to those higher costs hurts productivity gains, wage growth, and job creation.[41]

The 2017 tax bill substantially improved the tax treatment of investment in productive machinery and equipment by increasing the § 179 expensing threshold from $500,000 to $1 million[42] and by allowing for so-called bonus depreciation that permitted expensing of most machinery and equipment placed in service between September 27, 2017, and December 31, 2022.[43] The improvements related to capital cost recovery began to phase-out in 2023 and will be entirely phased out by the end of 2026.[44] These provisions led to substantially increased investment and higher real wages until the COVID-19 pandemic caused major disruptions.[45]

Congress should provide an immediate tax deduction for the cost of purchasing all machinery and equipment (i.e., expensing).[46] Alternatively, at a minimum, Congress should provide for the immediate expensing of all machinery and equipment used in manufacturing, mining, energy

production, construction, and agriculture. Congress should also provide for the immediate expensing of all structures used in manufacturing, mining, energy production, construction, and agriculture.[47]

Tax Rates. The corporate income tax is the most economically damaging tax that the federal government imposes.[48] It has a pronounced, demonstrable adverse impact on investment, productivity, and wages. Who bears the actual economic burden of the corporate income tax is an open question.[49] One thing is certain: It cannot be corporations. A corporation is a legal fiction, and legal fictions do not pay taxes—people pay taxes. The corporate tax could be borne by corporate shareholders in the form of lower returns;[50] owners of all capital (again in the form of lower returns);[51] corporate customers in the form of higher prices;[52] or employees (in the form of lower wages).[53] It is, almost certainly, some combination of these.[54] The economics profession has changed its thinking on this issue several times during the past four decades, but the latest consensus is that workers probably bear more than half of the burden of the corporate income tax because capital is highly mobile while labor is not.[55] Labor's share of the corporate tax burden is potentially as high as three-quarters.[56] The substantial real-wage improvements after the 2017 corporate rate reductions support the proposition that the economic incidence of the corporate tax falls substantially on labor. Nevertheless, government estimators continue to assume that the primary incidence of the corporate tax is on those who own capital.[57]

The 2017 tax bill reduced the federal corporate tax rate from 35 percent to 21 percent. This moved the United States from having the highest corporate tax rate in the developed world to being in the middle of the pack.[58]

In 2023, the combined U.S. federal and state corporate tax rate was 25.8 percent. This compares to the OECD average of 26.2 percent and the European Union average of 25.2 percent (both weighted by gross domestic product (GDP)).[59] The Biden Administration proposed raising the federal corporate tax rate to 28 percent, which would result in a combined state and local corporate tax rate of 32.8 percent.[60] Had the Administration's proposal been adopted, the U.S., once again, would have the highest corporate tax rate in the developed world. There are few things that would have a worse impact on the incentive to produce things in the U.S. than this.

At a minimum, the current 21 percent federal corporate tax rate should be maintained. Ideally, it should be reduced so that the U.S. becomes highly competitive.

Research and Experimentation Expenses. One of a number of economically counter-productive provisions in 2017 tax bill was a requirement that the cost of research and experimentation be deducted over five years rather than in the year the cost was incurred.[61] This raises the cost of conducting such research and makes it less attractive to conduct research in the United States. Policymakers should not artificially increase the cost of developing innovative products in the U.S.

Congress should return to the prior policy of allowing the cost of conducting research and experimentation to be deducted in the year incurred. The Tax Foundation, using its general equilibrium model, has estimated that canceling the amortization of research expenses would, in the long run, increase the size of the economy by 0.15 percent, raise wages by 0.12 percent, increase the size of the capital stock by 0.26 percent, and raise employment by 30,600 full-time equivalent jobs.[62]

Interest Expense. Another economically counter-productive provision in 2017 tax bill was a provision limiting the deduction for net business interest paid to no more than 30 percent of "adjusted taxable income."[63] Initially (2018), adjusted taxable income was earnings before interest, taxes, depreciation, and amortization (EBITDA). From 2022, adjusted taxable income was earnings before interest and taxes (EBIT).[64] EBIT is less than EBITDA.[65] Thus, the 30 percent limitation now allows less interest expense to be deducted. These rules were temporarily relaxed during the pandemic.[66]

From the advent of the corporate income tax until the 2017 tax bill, businesses could generally deduct all interest expense, subject to a few minor limitations.[67] Besides establishing a dangerous precedent of disallowing politically disfavored business expenses and potentially increasing taxable corporate income beyond actual corporate earnings, this provision in the 2017 tax bill, effective in 2022, raises the cost of capital and reduces investment.

There should be symmetry in the tax treatment of interest. If interest income is taxable, then interest expense should be deductible. If interest income is not taxable, then interest expense should not be deductible. This principle applies in both a properly configured income tax (no matter which competing definition of income one subscribes to) and in a consumption tax.

A simple example may help the reader intuitively understand why this is so. Consider a taxpayer that has $100 in interest income and $100 in interest expense. Consider another taxpayer that has no interest income and no interest expense. Otherwise, their economic situation is identical. In neither an income tax nor a consumption tax should the tax liability of the two taxpayers vary. Either the interest income *and* interest expense of the first taxpayer should be disregarded entirely or the taxpayer should

both include the interest income *and* deduct the interest expense on the tax return. The same is true of businesses. In an income tax, allowing a business to deduct expenses incurred in operating the business is not a "subsidy" but an integral aspect of getting the income tax base right.

Making interest expense non-deductible for corporations, as has been proposed, would raise the cost of external debt financing substantially—by about 26.5 percent—and reduce investment.[68] The disallowance under current law has a less pronounced adverse effect and is highly variable since the disallowance is a function of EBIT rather than simply a disallowance of a specified percentage of interest expense. But it nevertheless has an adverse effect on productivity improvement, output, and real wages. Productivity gains are closely correlated to investment because capital investment in machinery, equipment, and structures makes workers more productive and new investment incorporates technological advancements.

Compliance Costs. The U.S. tax system is monstrously complex and much more complex than those of most developed countries. The compliance costs[69] associated with the income tax have been estimated by the Tax Foundation to be roughly half a trillion dollars annually.[70] This estimate, which is quite plausible given its derivation is nearly 2 percent of GDP and about 11 percent of federal receipts. Money spent on tax lawyers and accountants and conducting paperwork obligations to satisfy the Internal Revenue Service is money better spent on productivity-enhancing investments. Compliance costs are a serious drag on all business activity in the U.S.—but have a particularly adverse impact on smaller firms and firms, such as manufacturers, that must compete with foreign companies that do not have the same administrative burden.

Destination-Principle Taxation. The U.S. income tax system imposes a major burden on businesses that produce things in the U.S. Foreign firms that produce things outside the U.S. but sell them to U.S. buyers bear no federal tax burden other than tariffs. That is because the U.S. federal income tax system is an origin-principle tax system.

U.S. trading partners raise a substantial portion of their national government revenue from destination-principle consumption taxes, such as a value-added tax or goods-and-services tax. OECD countries, on average, raise 21 percent of revenue from such taxes.[71] In the U.S., only state governments impose a sales tax. Destination-principle taxes impose the same tax on goods whether they are produced domestically or abroad. They tax based on the destination of the consumption, not the origin of the production.

In the context of fundamental tax reform, moving from an origin-principle tax to a destination-principle tax like a national sales tax, a business

transfer tax, or a destination-principle cash flow tax would have a pronounced positive impact on the incentive to produce goods in the United States rather than abroad.[72]

Permitting Reform

It is vitally important that Congress reform the law so that it no longer takes many years[73] and many millions of dollars to get permission to build a new factory, mine, oil or gas wells, power plant (whether using conventional or alternative sources of energy), transmission line, or to undertake a similar project. The expense and delay involved in securing permits drives up costs and drives manufacturing and other industrial production from the United States. The current process involves regulations and other requirements from more than a dozen agencies that have been steadily accumulating for decades.[74] American economic arteries are clogged. The only beneficiaries of the current system are lawyers, consultants, and bureaucrats.

Incremental reforms have not successfully addressed the problem. Modest progress was made with the enactment of Title 41 of the FAST Act.[75] The Trump Administration's "One Federal Decision" executive order also eased the burden.[76] This executive order, however, was rescinded on the first day of the Biden Administration.[77] The solution is to fundamentally transform the way permitting is done in the U.S.

A company seeking to build a factory, open a mine, drill for oil and gas, or build an infrastructure project must navigate a daunting federal alphabet soup. Agencies from which a permit may be required include the:

- Department of Agriculture (including the U.S. Forest Service);
- Army Corps of Engineers;
- Department of Commerce (including the National Telecommunications and Information Administration and the National Oceanic and Atmospheric Administration);
- Department of the Interior (including the U.S. Fish and Wildlife Service, Bureau of Land Management, the Bureau of Reclamation, the National Park Service, and the Bureau of Ocean Energy Management);
- Department of Energy;

- Department of Transportation;
- Department of Defense;
- Environmental Protection Agency (EPA);
- Federal Energy Regulatory Commission;
- Nuclear Regulatory Commission;
- Department of Homeland Security;
- Department of Housing and Urban Development;
- Council on Environmental Quality; and
- Advisory Council on Historic Preservation.

In addition, permits from a variety of state and local governments must be obtained. Any one of these agencies may derail a project. Moreover, large projects usually must run a litigation gauntlet after permits are granted because third parties challenge favorable decisions. This results in further delay and still higher costs.

NEPA. Reducing this complexity and expense requires amending the National Environmental Policy Act (NEPA).[78] Even progressives are starting to understand that the current process is irredeemably broken because it is extraordinarily difficult for them to build the transmission lines and alternative energy plants that they wish to build to achieve their greenhouse gas emission objectives.[79]

A well-structured permitting process would work as follows:

1. The lead agency for each application should be determined by the Executive Director of the Federal Permitting Improvement Steering Council[80] or the Chairman of the Council on Environmental Quality.[81] The Director (or Chairman) should be charged with making the designation and enforcing the lead agency's responsibilities. The lead agency should be responsible for dealing with other federal agencies. Other agency cooperation with the designated lead agency should be statutorily required, and an office within each agency should be created to manage this coordination and cooperation. Generally, these

requirements were enacted by the 2015 Fixing America's Surface Transportation Act or FAST Act-41).[82] This is sometimes referred to as a "one-stop shop."

2. The law (or an executive order) should require that the lead agency "shall issue" the required permits within a specified time unless the agency establishes, in written findings of law and fact, that clear and convincing evidence demonstrates that the permit should not be issued.

3. The lead agency should provide notice within a specified time of any deficiencies or insufficiencies in the information provided by the applicant to the lead agency and provide the applicant with an opportunity to cure those deficiencies or insufficiencies. The time period for the agencies to decide whether to issue the permit would be stayed until the applicant's response to this notice was received. This would be the only stage in which the requisite time period could be elongated.

4. The law should provide that, should the agency fail to: (a) issue the permit or (b) issue findings of law and fact denying the permit within the specified time period, the permit is deemed granted.

5. Because the legal, regulatory, and scientific questions presented by the permitting processes are complex and specialized, Congress should create and fund a specialized Article III court—not a captive administrative law court—that can expeditiously resolve permitting disputes (whether involving the substantive issue of whether the permit should be granted or issues related to the sufficiency of information provided). Congress should require that all third parties, whether private parties or state or local governments, who wish to contest a permitting decision must engage at this point in the litigation, and it should bar third parties from challenging the granting of a permit in other jurisdictions or venues or at a later date.

Such a system would enable businesses and entrepreneurs to build things again in the United States. It would enable legitimate environmental interests or other concerns to be heard and resolved but stop the endless bureaucratic wrangling and litigation that raises costs and introduces needless delays to almost any project.

An Effective Permitting System. The sections below explain the need for some of the features needed for a truly effective permitting system.

Information to Be Submitted. There should be clear statutory specification of what information an applicant must submit. Information beyond the statutory requirements should be prohibited. Page limits including appendices should be established. If an agency determines that the information provided by an applicant is insufficient or deficient, the lead agency should be required to give notice and an opportunity to cure to the applicant.

A Unified Permitting Process. The federal permitting process should be unified. This is sometimes called a one-stop shop and is common in other countries.[83] One lead agency should be responsible for any given permit application. The lead agency should be responsible for coordinating with other federal agencies and ensuring that those agencies meet their obligations. As discussed above, the FAST Act and the first Trump Administration took meaningful steps in this direction. The Fiscal Responsibility Act of 2023 moved further in this direction.[84]

Permitting Council. The Federal Permitting Improvement Steering Council was established by the FAST Act in 2015.[85] The Council should serve as the agency that assigns the lead federal agency for handling the federal permitting process. Congress should ensure that it has the authority to ensure that agencies comply with the new process. The Executive Director already has responsibility under the FAST Act for designating the "facilitating agency."[86]

Defined Period of Review. Although a reasonable period of review should be allowed, federal agencies must be required to act within a defined period of time. They should not be allowed to drag the permitting process on indefinitely and, effectively, kill projects via bureaucratic inertia. The time period should probably be longer for more complex projects measured by the number of federal agencies involved and the contemplated size of the investment or some other measure.

Legal Standard. In a free society, the presumption should be that entrepreneurs and others can undertake productive activity. Government should not make it hard to build a more prosperous society. Agencies should be required to demonstrate by clear and convincing evidence—not merely a preponderance of the evidence—that a permit should not be granted. This should also be the standard of review by the courts.

While the applicant should have the burden of production of information, the burden of persuasion should be on the government. This is analogous to the requirements of Internal Revenue Code § 7491.[87] Such an approach would mean that the presumption becomes that businesses can build new, modernized, more competitive manufacturing plants or undertake other projects, such as energy pipelines, unless the government establishes that

it is harmful. Now a business must run a legal and regulatory gauntlet and, in effect, overcome a presumption that nothing new should be undertaken.

Specialized Article III Forum for Resolving Disputes. Because the permitting processes presents many complex, specialized questions for resolution, Congress should create and fund a specialized Article III court that can expeditiously adjudicate permitting disputes. It could be called the United States Permitting Court. It would have exclusive subject matter jurisdiction over permitting issues including the substantive issues of whether the permit or permits should be granted and issues related to the sufficiency of information provided. Appeals from the Permitting Court would be filed in the Court of Appeals for the Federal Circuit.

While most specialized jurisdiction courts are so-called Article I courts,[88] specialized jurisdiction Article III courts do, and have,[89] existed. The United States Court of International Trade is an Article III court.[90] The United States Foreign Intelligence Surveillance Court is an Article III court.[91] It is important that the permitting court be an Article III court so that it has independence from the executive branch. Congress should certainly not establish it as a constitutionally suspect administrative law court with limited independence and authority.

Third-Party Challenges. Running the permitting gauntlet is only half of the process for firms seeking to get projects underway. After the permits are approved, almost any major project sponsor can expect to endure multiple lawsuits in various venues from private parties challenging those approvals. This involves further delays and major expense. Congress needs to amend a variety of statutes to channel these lawsuits and expedite the resolution of the disputes so that courts achieve a final disposition within a reasonable time.

Many lawsuits use the right of review[92] established by the Administrative Procedure Act (APA) to challenge agency actions approving projects.[93] The APA provides that a "person suffering legal wrong because of agency action, or adversely affected or aggrieved by agency action within the meaning of a relevant statute, is entitled to judicial review thereof." The APA should be amended to channel all challenges to permitting decisions to the Permitting Court described above by granting that court exclusive subject matter jurisdiction over permitting decisions.

In addition, a statutory materiality standard should be enacted[94] so that indirect, speculative, or quantitatively minor matters not addressed or fully discussed in an Environmental Impact Statement do not derail the permitting process.[95] Such a provision would be comparable to the materiality standard in securities law.

These changes should apply, without distinction, to all the various environmental and energy statutes that explicitly create a private cause of action as well as those that have been held to implicitly do so. For example, there are currently statutes creating a private cause of action or permitting "citizen suits" for decisions relating to solid waste disposal;[96] Clean Air Act provisions;[97] powerplant and industrial fuel use;[98] noise control;[99] submerged lands;[100] Comprehensive Environmental Response, Compensation, and Liability Act provisions relating to hazardous materials;[101] water pollution;[102] energy conservation programs;[103] surface coal mining;[104] outer Continental Shelf lands;[105] scenic areas;[106] and emergency planning.[107] There are probably others.

In addition, there is a nascent movement under the rubric "environmental justice" to use civil rights statutes to litigate environmental issues on disparate impact grounds.[108] Congress should bar such suits and, at the very least, make it clear that such lawsuits, if allowed to go forward by a court, need to be transferred to the Permitting Court if they involve permitting decisions.

Besides granting exclusive subject matter jurisdiction to the permitting court over permitting decisions, Congress should provide a mechanism so that all challenges based on federal law, whether by private parties or state and local governments, to one project are consolidated into one case heard by one judge. Congress should further provide that any interested party must become a party to that litigation and that collateral or later challenges would be barred.

A relatively short statute of limitations should govern permitting cases provided, however, that the statute of limitations would be tolled if an applicant made willful or reckless misrepresentations in its application. As an Article III court, the Permitting Court would have the authority to issue injunctions to require the applicant or its regulators to take actions required by law.

Labor and Employment Laws, Training, and Apprenticeships

Policymakers should focus on changing labor and employment laws, regulations, or other practices that neither increase wages or benefits nor affect health and safety but raise costs and reduce productivity at U.S. manufacturing plants. Over even a relatively short period of time, such rules have an adverse impact on workers because employers simply cannot pay wages that exceed worker productivity or the firm will fail. Although it may

not be in the interest of labor organizations and union officials, eliminating such rules will benefit both workers and businesses. In addition, there are measures policymakers can adopt to improve the availability of skilled workers that manufacturers need and the ability of workers to get the skills necessary to secure high-paying jobs in manufacturing.

Mutually Beneficial Contract Amendments. Neither the National Labor Relations Act (NLRA) nor the Labor Management Reporting and Disclosure Act (LMRDA) imposes a legal requirement that union membership is entitled to vote whether to ratify a collective bargaining agreement or contract or an amendment to that contract.[109] Under current law, union management may enter into a binding agreement with an employer without union members' consent unless internal union governing documents such as by-laws provide otherwise. Moreover, even when afforded the opportunity to vote whether to ratify a contract, the choice is almost always to vote "yes" or "no" on the entire, often lengthy and complex, contract.

Certain work rules are often incorporated into collective bargaining agreements that have nothing to do with wages, benefits, or workplace health and safety but can often have substantial adverse effects on productivity. Examples would include overly rigid job classifications; the maintenance of obsolete positions; unnecessary job qualification or educational standards; scheduling; cross-training; provisions preventing automation or technological advances; provision granting preferences or privileges based on seniority; restrictions on subcontracting or temporary, part-time, or seasonal employees; complex and lengthy grievance processes; excessive break times or mandated rest periods; and the like.

The NLRA should be amended so that employers can propose contract amendments and the union members be afforded a statutory right to vote on the proposed amendment within a specified period.[110] These amendments would be limited to amendments that do not relate to benefits or workplace health and safety (as defined by the Occupational Safety and Health Act).[111] For each proposed amendment, the employer would propose:

- The text of the proposed amendment;
- A short explanation of the reasons for the amendment; and
- The proposed wage increase, if any, that would be provided if the contract amendment is agreed to, the class of employees to whom the wage increase would be provided, and the term for which the wage increase would be provided.

The union should be provided a statutory right to provide its view to its membership. Both the employer and the union should have the right to make presentations to employees. The LMRDA should be amended to require that employees get a copy of the proposed contract amendment at least 14 days prior to the contract amendment vote.[112] The LMRDA should also be amended to ensure that every employee is provided a complete copy of every collective bargaining agreement governing their employment.

Thus, an employer could offer an amendment, for example, that would provide a 25-cent-per-hour wage increase to all employees if the employer is afforded greater flexibility to assign employees to various job functions. In this way, employers could gain productivity-enhancing changes and both employers and employees could share in the gains to be had from improving productivity.

Merit Bonuses. People respond to incentives. If employees are rewarded for working hard and working smart, then they are more likely to do so. The NLRA should be amended to allow employers to provide merit bonuses to all employees, including union employees, to encourage productive work.[113]

NLRB Micro-Unions Rule. In *Specialty Healthcare*,[114] the Obama-era NLRB started the process of dismantling the traditionally understood "community of interest" rule for determining bargaining units by allowing the initial bargaining unit to be a single job description, namely certified nursing assistants.[115] In *Specialty Healthcare*, the NLRB enunciated a new standard that effectively allows unions to determine the bargaining unit (i.e., the representation election electorate)—and the union determination is presumed correct unless the employer "demonstrates that employees in the larger unit share an overwhelming community of interest with those in the petitioned-for unit." This presumption that the union determination of bargaining unit is correct was, in practice, virtually irrebuttable. The *Specialty Healthcare* approach to bargaining-unit selection means that even relatively small employers may be required to deal with many different unions.

For example, in *Northrop Grumman Shipbuilding*,[116] the union was permitted to organize a departmental unit of 223 radiological control and other technicians out of 2,400 technical employees and 18,500 Northrop employees overall at the shipyard. A few years later, in the *Bergdorf Goodman* case,[117] the union sought to represent all full-time and regular part-time women's shoes associates in the 2nd Floor Designer Shoes Department and in the 5th Floor Contemporary Shoes Department. The employer asserted that the smallest appropriate unit must be comprised of a store-wide unit, or, in the alternative, all selling associates in the store. The NLRB allowed the union-chosen bargaining unit of 46 employees in the 2nd and 5th floor shoe

departments to be separately organized. Such an approach allows unions to "cherry-pick" parts of a business in which they have majority support—even though they would lose an election in a larger bargaining unit.

In December of 2017, the NLRB reversed *Specialty Healthcare* in its *PCC Structurals*[118] decision and returned to the traditional community-of-interest standard for determining an appropriate bargaining unit. In *American Steel Construction*,[119] the NLRB once again reversed course returning to its *Specialty Healthcare* standard.

To prevent a multiplicity of bargaining units, tremendous complexity and a balkanization of the workplace, Congress needs to statutorily provide that the traditional community of interest rule governs.

Protected Concerted-Activity Rules. Section 7 of the NLRA provides that "[e]mployees shall have the right to self-organization, to form, join, or assist labor organizations, to bargain collectively through representatives of their own choosing, and to engage in other concerted activities for the purpose of collective bargaining or other mutual aid or protection." These provisions apply in both unionized and non-unionized companies and are among the most central guarantees in the NLRA.[120] How these provisions are interpreted, however, can have a pronounced impact on the workplace and business operations.

The Obama-era NLRB dramatically expanded the scope of protected concerted activity as part of its protected concerted-activity initiative and its social media initiative. *WorldMark by Wyndham*,[121] for example, held that an employee was engaged in protected concerted activity when he questioned his supervisor, in front of his coworkers, about a new dress code, and that the employer warning was unlawful. His actions were deemed: (1) protected; (2) concerted; and (3) for the mutual aid and protection of his coworkers. In *Knauz BMW*,[122] the NLRB held that a business requiring its employees to be courteous to customers and one another is an unlawful infringement on the free speech rights implicit in the protected concerted-activity protections in the NLRA.

Section 7 should not be construed to protect "offensive, demeaning, abusive or inappropriate remarks." It is quite likely that employers that permit the use of such language would find themselves liable under other theories (sexual harassment, civil rights violations, etc.). Federal law should not result in employer liability whether they prohibit inappropriate speech or permit it.

In the 2019 *Alstate Maintenance* case,[123] the board returned to a more traditional understanding of the distinction between protected group action and unprotected individual action. Moreover, the Trump-era NLRB General Counsel issued a memorandum indicating that employer rules:

- Requiring civility;
- Prohibiting workplace photography or recording;
- Prohibiting insubordination, non-cooperation, or on-the-job conduct that adversely affects operations;
- Prohibiting disruptive behavior;
- Protecting confidential, proprietary, and customer information or documents;
- Prohibiting defamation or misrepresentation;
- Prohibiting employee use of employer logos and trademarks;
- Requiring authorization to speak for the company; and
- Prohibiting disloyalty, nepotism, or self-enrichment

are "generally lawful, either because the rule, when reasonably interpreted, does not prohibit or interfere with the exercise of rights guaranteed by the Act."[124]

This memorandum was rescinded by the Biden Administration.[125]

In *Lion Elastomers LLC*[126] and other cases, the Biden NLRB returned to the Obama-era rules regarding protected concerted activities. Either the NLRB or Congress should act to reinstate the reasonable rules that governed during the first Trump Administration.

Apprenticeship Programs. Apprenticeships are a proven alternative to degree programs, and a 2017 study estimated that the number of occupations commonly filled through apprenticeships could nearly triple, that the number of job openings filled through apprenticeships could expand eightfold, and that the occupations ripe for apprenticeship expansion could offer 20 percent higher wages than traditional apprenticeship occupations.[127] Yet, the Biden Administration cancelled new and expanding Industry-Recognized Apprenticeship Programs, proposed an apprenticeship regulation that prohibits two out of three existing Registered Apprenticeship Programs, and issued an executive order that discourages companies from creating their own, non-government-registered apprenticeship programs.[128]

In contrast to the Administration's restrictions on apprenticeships, the Apprenticeship Freedom Act[129] and the Training America's Workforce Act[130] would enable apprenticeships to expand across more industries, so that more young people can access on-the-job, paid education leading to a successful career. Community colleges and private enterprises can play particularly important roles in developing a more robust apprenticeship system.

Accreditation and Post-Secondary Options. Current federal student loans and grants crowd out alternative, and often more effective, education options by limiting how students can use federal aid. The Higher Education Reform and Opportunity (HERO) Act[131] would decouple federal student loans and grants from the federal accreditation process so that federal student aid could follow students to institutions *and* individual courses that are credentialed under a state's accreditation system. The HERO Act would also impose "skin-in-the-game" requirements on universities to improve the effectiveness of education. These reforms would allow students to have a more effective and customized higher education experience, enter the labor market sooner, and reduce debt burdens.[132]

Occupational Licensure Laws. Licensure laws are meant to protect the public from unqualified or unscrupulous practitioners. In practice, many state licensure schemes act as cartels that protect incumbents from competition and raise costs for consumers and businesses alike.[133] Licensure laws are especially harmful to younger and lower-income individuals and the more than one-in-four American adults that have a criminal record.[134] Requiring people to pay hefty fees and attend dozens or hundreds of hours of training[135] before they can legally work limits opportunities and drives up costs for consumers and businesses. Moreover, requiring already licensed individuals to undergo additional training and pay additional fees to practice their profession in a different state than that in which they were licensed restricts worker mobility and job opportunities. Such requirements also needlessly raise costs for businesses by creating a cartel of licensed practitioners and reducing geographic mobility.

State policymakers should review existing licensure laws and maintain only those that are truly necessary to protect consumers and businesses. Reciprocity laws to enable the movement of already licensed individuals between states should be substantially liberalized.

Employees Versus Independent Contractors. Increasingly, many Americans want or need more flexibility than a traditional nine-to-five job provides. Flexible work arrangements are likely to improve worker retention and satisfaction and therefore can be expected to reduce manufacturing costs and improve productivity. Moreover, many American businesses want

the reduced costs and flexibility of using contractors rather than permanent employees. And economic studies show that flexibility increases the number of people who can work, as well as the hours that people work.[136]

More than half of the 64 million Americans who perform freelance work say that they are unable to work in a traditional job because of their personal health or their family caregiving needs.[137] A Biden Administration rule that took effect on March 11, 2024, could drastically restrict independent work opportunities.[138] A similar rule in California was estimated to reduce self-employment by 10.5 percent and total employment by 4.4 percent.[139] The 21st Century Worker Act[140] would provide clarity and future certainty by establishing a bright-line test, consistent across all federal laws, to determine who is an "employee" and who is an "independent contractor," based primarily on how much control an employer exerts over a worker and with deference to workers' preferred classifications in cases of ambiguity.

The Davis–Bacon Act and Project Labor Agreement Requirements. Even as the U.S. construction industry faces a workforce shortage of more than half a million workers, the Biden Administration implemented a 220-page Davis–Bacon Act rule[141] that will limit the number of workers and companies that can work on federally funded construction projects. Even before this update, the Davis–Bacon Act was estimated to drive up federal construction costs by approximately 10 percent.[142] Similarly, Project Labor Agreement (PLA) requirements drive up construction costs and generally restrict federal construction projects to unionized workers that represent *fewer than 12 percent* of all construction workers.[143] This will slow infrastructure projects considerably and cost taxpayers dearly.

Congress should repeal the Davis–Bacon Act and PLAs. Absent full repeal, Congress should assign estimation of prevailing wage rates to the Bureau of Labor Statistics, which is capable of far more accurate wage calculations.[144]

Reducing Needless Supply-Chain Costs

Tariffs and Quotas on Manufacturing Inputs. Tariffs are a tax on imports. Tariffs on inputs used by U.S. manufacturers raise their costs and make them less competitive in the marketplace. In the short term, it is difficult to increase domestic production of inputs without significant long-term capital investments. Therefore, tariffs on inputs used in U.S. industrial production should be imposed only with great care and justification, such as to further national security interests, to reduce dependence on adversaries for vital supply chains, or, in limited circumstances, to induce future tariff reductions on U.S. goods and services by foreign governments. The flip side

of tariffs are domestic quotas on input production. For example, because of sugar quotas, U.S. sugar is twice the world price which raises input prices on food manufacturers dramatically. These high prices not only cost American consumers approximately $2.4 billion to $4 billion a year, they cost an estimated 17,000 to 20,000 jobs in the food processing and confectionery industries and cause production to move outside the U.S.[145]

Health Care Costs. Recommendations regarding reform of the health care system are beyond the scope of this *Special Report*, but that should not belie the degree of its importance to the competitiveness of U.S. manufacturing. Employer health insurance costs are about 7 percent of total compensation costs.[146] U.S. health care spending as a percentage of GDP has consistently remained around 60 percent more than the average of the other countries G7 (Canada, France, Germany, Italy, Japan, the United Kingdom, and the United States) and approximately double the OECD average. U.S. spending per capita (about $11,000 in 2019), when adjusted for the differences in price levels across countries, is 2.5 times the OECD average of just over $4,000, and twice as much as the average per capita spending in the other high-income G7 countries.[147] This is a tremendous financial drag on manufacturers operating in the U.S.

Energy, Environmental, and Land-Use Policies. High energy costs or unreliable energy sources make manufacturing difficult, and the Biden Administration's extreme energy policies have harmed the competitiveness of U.S. manufacturing. European energy and environmental policies have resulted in extremely high electricity prices. U.K. electricity prices are nearly five times that of China and three times that of the U.S. German electricity prices are nearly three times that of China and two times that of the U.S.

Because of highly destructive European energy policies, European manufacturers are uncompetitive and relocating abroad to survive.[148] The Biden Administration sought to emulate the European example by adopting energy and environmental policies that have increased energy prices and, if fully implemented, would devastate U.S. manufacturing. Those policies need to be reversed.

The Biden Administration Environmental Protection Agency issued 2,004 rules.[149] Many of these are relatively small changes to the regulatory framework. But others are breathtaking in scope and cost. There are also hundreds of voluminous rules promulgated by the Biden (and Obama) Environmental Protection Agency, Federal Energy Regulatory Commission, Department of Energy, Council on Environmental Quality, Bureau of Land Management, U.S. Forest Service, and other agencies that drive up energy costs. Many of these rules would not pass a rigorous and honest cost-benefit analysis.

TABLE 3

Electricity Prices for Business, Selected Countries, September 2023

PRICES PER KILOWATT HOUR, IN U.S. DOLLARS

Country	Price	Price Compared to China	Price Compared to U.S.
China	$0.09	100%	59%
Canada	$0.11	122%	72%
South Korea	$0.13	142%	83%
India	$0.13	145%	85%
United States	$0.15	170%	100%
Japan	$0.19	213%	126%
France	$0.22	242%	142%
Germany	$0.27	304%	179%
United Kingdom	$0.43	481%	283%
Italy	$0.58	652%	384%

SOURCE: "Electricity Prices," GlobalPetrolPrices.com, September 2023, https://www.globalpetrolprices.com/electricity_prices/ (accessed February 5, 2025).

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A full discussion of the many reforms necessary to our extraordinarily complex energy and environmental regulatory system is not provided by this *Special Report*. However, a recent Heritage Foundation study found that commonsense energy and environmental reforms would produce peak employment gains of 6 million jobs and generate more than $25 trillion in GDP from now until 2050.[150] These reforms would include opening access to energy exploration of federal waters and lands, reversing counterproductive federal regulations relating to oil and gas production, allowing states to manage drilling on federal lands, continuing to allow fracking on private lands, prohibiting taxes or regulations on greenhouse gas emissions, and permitting reform (discussed above).[151]

Bureau of Land Management and Forest Service restrictions on land use need to be reduced. The U.S. needs abundant energy and a strong, sustainable source of lumber and wood products. Part of the solution is permitting reform, discussed above. There are, however, a wide variety of other substantive reforms to land-use policies that would be constructive.[152] These reforms can be expected to have a particularly important positive impact on mining, oil and gas production, and agriculture.

It should also be noted that state and local governments retain a very large footprint when it comes to land-use regulation, both regarding state-owned land and private lands. These rules need to be reformed.

Summary of Recommendations

Below is a summary of all 28 recommendations detailed in this *Special Report*.

1. **Provide** an immediate tax deduction for the cost of purchasing all machinery and equipment (expensing) or, alternatively, expense all machinery and equipment used in manufacturing, mining, energy production, construction, and agriculture.

2. **Expense** all structures used in manufacturing, mining, energy production, construction, and agriculture.

3. **Maintain** or reduce the current corporate tax rate.

4. **Provide** full expensing for research and experimentation expenses incurred in the United States.

5. **Provide** full deductibility for business interest expense or, alternatively, provide full deductibility for interest expense incurred to acquire or build all machinery, equipment, and structures used in manufacturing, mining, energy production, construction, and agriculture.

6. **Reduce** the complexity and compliance costs of the U.S. tax system.

7. **In the context of fundamental tax reform, move** to a destination-principle tax system that imposes the same tax burden on foreign-produced goods and U.S.-produced goods instead of the current origin-principle tax system that taxes U.S.-produced goods but not foreign-produced goods.

8. **Build** on FAST Act one-stop-shop permitting reforms.

9. **Reinstitute** the "One Federal Decision" Trump executive order permitting reforms.

10. **Require** that the lead agency "shall issue" the required permits within a specified time unless the agency establishes, in written findings of law and fact, that clear and convincing evidence demonstrates that the permit should not be issued.

11. **Require** that the lead agency provide notice within a specified time of any deficiencies or insufficiencies in the information provided by the applicant to the lead agency and provide the applicant with an opportunity to cure those deficiencies or insufficiencies.

12. **Provide** that should the agency fail to: (a) issue the permit or (b) issue findings of law and fact denying the permit within the specified time period, that the permit is deemed granted.

13. **Create and fund** a specialized Article III court (not a captive administrative law court) that can expeditiously resolve permitting disputes. Require that all third-parties, whether private parties or state or local governments, engage at this point in the litigation and only in this court. Bar third parties from challenging the granting of a permit in other jurisdictions or venues or at a later date.

14. **Reverse** the burden of persuasion. Although project sponsors should have the burden of production of information, the burden of persuasion should be on the government.

15. **Amend** the National Labor Relations Act so that employers can propose collective bargaining contract amendments that do not relate to benefits or workplace health and safety and provide union members a statutory right to vote on the proposed amendment within a specified period. The employer would propose: (a) the text of the proposed amendment; (b) a short explanation of the reasons for the amendment; and (c) the proposed wage increase, if any, that would be provided if the contract amendment is agreed to, the class of employees to whom the wage increase would be provided, and the term for which the wage increase would be provided. The union should be provided a statutory right to provide its view to its membership. Both the employer and the union should have the right to make presentations to employees. The Labor Management Reporting and Disclosure Act should be amended to require that employees get a copy of the proposed contract amendment at least 14 days prior to the contract amendment vote.

16. **Amend** the NLRA to allow employers to provide merit bonuses to all employees, including union employees.

17. **Reverse** NLRB micro-unions decision by statute.

18. **Provide** reasonable statutory protected concerted activity rules.

19. **Replace** failed federal job-training programs with more effective private, state, or local programs.

20. **Expand** apprenticeship programs. The Apprenticeship Freedom Act and the Training America's Workforce Act provide models.

21. **Reform** accreditation to provide more post-secondary options. The Higher Education Reform and Opportunity (HERO) Act provides a model.

22. **Eliminate** unnecessary occupational licensure laws.

23. **Protect** independent work by codifying a bright-line test for employees versus independent contractors. The 21st Century Worker Act provides a model.

24. **Allow** workers in right-to-work states to opt out of union representation, so that they do not have to pay for representation they do not want, and allow those who opt out to negotiate directly with their employer. The Workers Choice Act provides a model.

25. **Repeal** the Davis–Bacon Act and end Project Labor Agreement (PLA) requirements in Federal Construction Projects

26. **Reverse** hundreds of voluminous rules promulgated by the Biden (and Obama) Environmental Protection Agency, Federal Energy Regulatory Commission, Department of Energy, Council on Environmental Quality, Bureau of Land Management, U.S. Forest Service, and other agencies (either by statute or by rulemaking) to ensure abundant, affordable energy for the American people and U.S. manufacturers.

27. **Reduce** quotas and **avoid** tariffs on inputs used in U.S. industrial production and manufacturing except when justified by strategic or key national interests.

28. **Reduce** health care costs.

Conclusion

Federal, state and local governments have adopted, at an accelerating pace, a wide variety of policies that harm businesses in industries that produce goods including manufacturing, energy production, mining, agriculture, and construction. Regulatory costs borne by manufacturers amount to approximately $13,000 per employee. These policies have a substantial adverse impact on industrial production in the U.S.

While manufacturing output has not appreciably declined, manufacturing *employment* has fallen substantially. Moreover, manufacturing employment as a share of all employment has also declined dramatically. There has been a notable migration of manufacturing and other production within the United States from jurisdictions that have a hostile business climate to those jurisdictions that welcome such businesses.

Governments should not adopt policies that encourage production to move overseas or that reduce opportunity and wages in the United States. That, unfortunately, is precisely what the federal government and many state and local governments are doing. A wide array of current policies disfavor industrial production in the United States and cause production to move outside of the U.S. Congress and the executive branch can improve a host of existing policies to make manufacturing in the United States more attractive and to bring manufacturing and other production back to the United States. Those include improved tax policy, permitting reform, improved labor and employment laws, better training and apprenticeships, better energy and environmental policies, measures to reduce supply chain costs, fewer federal land-use restrictions, and reduced health care costs.

Endnotes

1. For a discussion of the steps necessary to reduce geopolitical risks to the U.S. economy, see the "Safeguard and Advance U.S. Prosperity" section in James J. Carafano et al., eds., "Winning the New Cold War: A Plan for Countering China," Heritage Foundation *Special Report* No. 270, March 28, 2023, https://www.heritage.org/sites/default/files/2023-07/SR270.pdf.
2. Industrial production is a broader concept than manufacturing. It includes manufacturing, mining, quarrying, oil and gas extraction, and electric and gas utility output. Manufacturing accounts for about 73 percent of industrial production. See news release, "Industrial Production and Capacity Utilization," table 5, Federal Reserve, January 17, 2025, https://www.federalreserve.gov/releases/g17/current/g17.pdf (accessed February 5, 2025).
3. See Chart 1 below, and Federal Reserve Bank of St. Louis, "Industrial Production: Total Index, Index 2017=100, Monthly, Seasonally Adjusted," graph, updated January 17, 2025, https://fred.stlouisfed.org/series/INDPRO (accessed February 5, 2025). Index data is available for download at that link as well.
4. "Developed countries" in this case means Organization for Economic Co-operation and Development (OECD) countries. For a list of the 38 OECD countries, see Organization for Economic Co-operation and Development, "Members and Partners," https://www.oecd.org/about/members-and-partners/ (accessed February 5, 2025). See discussion below and Excel data table generated by U.N. Conference on Trade and Development, "Gross Domestic Product: GDP by Type of Expenditure, Value Added by Kind of Economic Activity, Total and Shares, Annual, 1970–2022," https://unctadstat.unctad.org/datacentre/dataviewer/US.GDPComponent (accessed February 5, 2025) (Search parameters: Manufacturing: individual economies, OECD, World). The U.S. accounts for roughly 33 percent of OECD GDP ($25.4 trillion out of $76.8 trillion in 2022).
5. A friend of the author once quipped that the only thing that the U.S. is good at manufacturing these days is rules. This pithily encapsulates a key problem that the U.S. faces. As this *Special Report* discusses at length, the manufacturing of rules harms the manufacturing of actual goods and services. But although the U.S. could manufacture much more than it does if policy changes are made, it is nevertheless manufacturing near record levels of goods and services.
6. U.S. Department of Agriculture, "Farm Labor: Number of Farms and Workers by Decade, U.S., 1910–2000," https://www.nass.usda.gov/Charts_and_Maps/Farm_Labor/fl_frmwk.php (accessed February 5, 2025), and Federal Reserve, "Employment Level: Agriculture and Related Industries," updated January 10, 2025, https://fred.stlouisfed.org/series/LNS12034560 (accessed February 5, 2025).
7. See, for example, Philip G. Pardey and Julian M. Alston, "The Drivers of U.S. Agricultural Productivity Growth," Federal Reserve Bank of Kansas City, 2020, https://www.kansascityfed.org/documents/7107/the-drivers-of-us-agricultural-productivity-growth.pdf (accessed February 5, 2025).
8. By real wages, inflation-adjusted total compensation (cash plus benefits) is meant.
9. While there is variance over short periods, this has proven true over extended periods. See, for example, James Sherk, "Productivity and Compensation: Growing Together," Heritage Foundation *Backgrounder* No. 2825, July 17, 2013, https://www.heritage.org/jobs-and-labor/report/productivity-and-compensation-growing-together; Michael R. Strain, "The Link Between Wages and Productivity Is Strong," in *Expanding Economic Opportunity for More Americans: Bipartisan Policies to Increase Work, Wages, and Skills*, Melissa S. Kearney and Amy Ganz, eds., Aspen Institute, February 2019, https://www.aspeninstitute.org/longform/expanding-economic-opportunity-for-more-americans/the-link-between-wages-and-productivity-is-strong/ (accessed February 5, 2025); and Martin S. Feldstein, "Did Wages Reflect Growth in Productivity?" National Bureau of Economic Research *Working Paper* No. 13953, April 2008, http://www.nber.org/papers/w13953 (accessed February 5, 2025).
10. Katherine Loughead, "Americans Moved to Low-Tax States in 2023," Tax Foundation, January 9, 2024, https://taxfoundation.org/data/all/state/state-population-change-2023/ (accessed February 5, 2025) (July 2022 and July 2023: New York: –1.1 percent, California: –0.9 percent, Illinois: –0.7 percent). See also U.S. Census Bureau, "State-to-State Migration Flows, 2022," https://www2.census.gov/programs-surveys/demo/tables/geographic-mobility/2022/state-to-state-migration/State_to_State_Migration_Table_2022_T13.xlsx (accessed February 5, 2025), and "Where Did Americans Move in 2023?" 2023, North American Van Lines *Moving Migration Report*, https://www.northamerican.com/migration-map (accessed February 5, 2025).
11. Defined as manufacturing in OECD countries. See discussion below for detailed data and data sources.
12. See section below entitled "U.S. Manufacturing Compared to World and OECD Manufacturing" for graphs, data, and citations.
13. Nicole V. Crain and W. Mark Crain, "The Cost of Federal Regulation to the U.S. Economy, Manufacturing and Small Business," National Association of Manufacturers, October 2023, https://nam.org/wp-content/uploads/2023/11/NAM-3731-Crains-Study-R3-V2-FIN.pdf (accessed February 5, 2025).
14. This is because regulatory costs do not increase linearly with size (whether measured by sales, assets, or employees). High levels of regulation disproportionately harm small firms and lead to greater market concentration.
15. CHIPS Act of 2022, Public Law 117–167. See also Anthony B. Kim, "CHIPS Act Spending Is Making America Less Free," Heritage Foundation *Commentary*, August 5, 2022, https://www.heritage.org/budget-and-spending/commentary/chips-act-spending-making-america-less-free; news release, "Senate CHIPS Act a Major Missed Opportunity to Counter Chinese Communist Party, Will Fuel Inflation," The Heritage Foundation, July 22, 2022, https://www.heritage.org/press/senate-chips-act-major-missed-opportunity-counter-chinese-communist-party-will-fuel-inflation; and Walter Lohman, "The Real Problem With CHIPS Subsidies," Heritage Foundation *Commentary*, May 19, 2022, https://www.heritage.org/big-tech/commentary/the-real-problem-chips-subsidies.

16. Known colloquially as the Inflation Reduction Act, its actual title is To Provide for Reconciliation Pursuant to Title II of S. Con. Res. 14, Public Law 117–169. See also Daren Bakst et al., "'Inflation Reduction Act' Is Euphemism for Big Government Socialism, Higher Prices," Heritage Foundation *Commentary*, August 2, 2022, https://www.heritage.org/budget-and-spending/commentary/inflation-reduction-act-euphemism-big-government-socialism-higher (accessed February 5, 2025); Richard Stern and Daren Bakst, "Combat the Inflation Reduction Act's Central Planning," Heritage Foundation *Commentary*, January 24, 2023 https://www.heritage.org/budget-and-spending/commentary/combat-the-inflation-reduction-acts-central-planning; Daren Bakst, "Inflation Reduction Act Shows Far Left's Extremism and Elitism," Heritage Foundation *Commentary*, August 16, 2022, https://www.heritage.org/budget-and-spending/commentary/inflation-reduction-act-shows-far-lefts-extremism-and-elitism; and Jack Spencer, "Inflation Reduction Act—or Radical Green New Deal?," Heritage Foundation *Commentary*, July 29, 2022, https://www.heritage.org/climate/commentary/inflation-reduction-act-or-radical-green-new-deal (accessed February 5, 2025).
17. See "Crony Capitalism, Special Privileges, Rent Seeking, Industrial Policy, and Mercantilism," in David R. Burton, "Comparing Free Enterprise and Socialism," Heritage Foundation *Special Report* No. 213, April 30, 2019, https://www.heritage.org/sites/default/files/2019-05/SR213.pdf.
18. For a discussion of the reasons and the literature, see "Why Markets 'Work,'" in Burton, "Comparing Free Enterprise and Socialism."
19. Federal Reserve of St. Louis, "Industrial Production: Total Index," https://fred.stlouisfed.org/series/INDPRO (accessed February 5, 2025).
20. "The South Is Fast Becoming America's Industrial Heartland," *The Economist*, June 12, 2023, https://www.economist.com/united-states/2023/06/12/the-south-is-fast-becoming-americas-industrial-heartland (accessed February 5, 2025); Jaison R. Abel and Richard Deitz, "Where Are Manufacturing Jobs Coming Back?" Federal Reserve Bank of New York, February 6, 2019, https://libertystreeteconomics.newyorkfed.org/2019/02/where-are-manufacturing-jobs-coming-back/ (accessed February 5, 2025); Jared Walczak, Andrey Yushkov, and Katherine Loughead, "2024 State Business Tax Climate Index," Tax Foundation, October 24, 2023, https://taxfoundation.org/research/all/state/2024-state-business-tax-climate-index/ (accessed February 5, 2025); Ceci Grover, "Best States for Manufacturing in 2023," Site Selection Group, August 21, 2023, https://info.siteselectiongroup.com/blog/best-states-for-manufacturing-in-2023 (accessed February 5, 2025); and "Best & Worst States for Business, 2023," Chief Executive, https://chiefexecutive.net/best-worst-states-business/ (accessed February 5, 2025).
21. The District of Columbia is not a state but would be the last ranked if included. Figures for California and Texas are below.

Employment Share as a Percentage of Total Non-Farm Employment

Jurisdiction	Manufacturing	Mining, Logging, Construction, and Manufacturing
District of Columbia	0.1%	2.1%
California	7.4%	12.7%
Texas	6.9%	14.4%

22. Excel data table generated by U.N. Conference on Trade and Development, "Gross Domestic Product: GDP by Type of Expenditure" and data at note 4, above, and Organization for Economic Co-operation and Development, "Gross Domestic Product (GDP) Total, Million U.S. dollars, 2022," https://data.oecd.org/gdp/gross-domestic-product-gdp.htm#indicator-chart (accessed March 7, 2025).
23. Excel data table generated by U.N. Conference on Trade and Development, "Gross Domestic Product: GDP by Type of Expenditure" (Manufacturing: individual economies, OECD, World).
24. U.S. Bureau of Labor Statistics, "May 2023 National Industry-Specific Occupational Employment and Wage Estimates, Sectors 31, 32, and 33—Manufacturing," https://www.bls.gov/oes/current/naics2_31-33.htm#00-0000 (accessed February 5, 2025).
25. BLM category 51-9199, "Production Workers, All Other," U.S. Bureau of Labor Statistics, "May 2023 National Industry-Specific Occupational Employment and Wage Estimates, Sectors 31, 32, and 33—Manufacturing," https://www.bls.gov/oes/current/naics2_31-33.htm#00-0000 (accessed April 1, 2025).
26. Although not separately stated in the table below, the agriculture, forestry, fishing, and hunting industry has average annual earnings of $43,010. See U.S. Bureau of Labor Statistics, "May 2023 National Industry-Specific Occupational Employment and Wage Estimates, Sector 11—Agriculture, Forestry, Fishing and Hunting," https://www.bls.gov/oes/current/naics2_11.htm#00-0000 (accessed February 5, 2025).
27. See, for example, Carafano et al., "Winning the New Cold War"; Maiya Clark, "The U.S. Defense Industrial Base: Past Strength, Current Challenges, and Needed Change," in Dakota L. Wood, ed., *2024 Index of Military Strength*, The Heritage Foundation, January 24, 2024, https://www.heritage.org/military-strength/topical-essays/the-us-defense-industrial-base-past-strength; Jerry McGinn, "Building Resilience: Mobilizing the Defense Industrial Base in an Era of Great-Power Competition," in Dakota L. Wood, ed., *2021 Index of Military Strength*, The Heritage Foundation, November 17, 2020, https://www.heritage.org/military-strength-topical-essays/2021-essays/building-resilience-mobilizing-the-defense-industrial; Brent Sadler, "America's Strategic Materials Problem," Heritage Foundation *Commentary*, March 4, 2021, https://www.heritage.org/defense/commentary/americas-strategic-materials-problem; and Maiya Clark and Ryan Williams, "Rare Earth Elements Aren't That Rare, But They're Vital to National Security," Heritage Foundation *Commentary*, February 26, 2021, https://www.heritage.org/defense/commentary/rare-earth-elements-arent-rare-theyre-vital-national-security.
28. Ibid.
29. The adequacy of the U.S. agricultural sector is not currently a problem.

30. Here energy production covers not only oil, gas, coal, uranium, and renewables, but also oil and uranium refining capacity.

31. See, for example, Philip G. Pardey and Julian M. Alston, "The Drivers of U.S. Agricultural Productivity Growth," Federal Reserve Bank of Kansas City, 2020, https://www.kansascityfed.org/documents/7107/the-drivers-of-us-agricultural-productivity-growth.pdf (accessed February 5, 2025).

32. Donald Trump, "Initial Rescissions of Harmful Executive Orders and Actions," Executive Order, January 20, 2025, https://www.whitehouse.gov/presidential-actions/2025/01/initial-rescissions-of-harmful-executive-orders-and-actions/ (accessed February 5, 2025). The rescinded orders include: Joseph Biden, "Climate-Related Financial Risk," Executive Order 14030, May 20, 2021, https://www.federalregister.gov/documents/2021/05/25/2021-11168/climate-related-financial-risk (accessed February 5, 2025); Joseph Biden, "Strengthening American Leadership in Clean Cars and Trucks," Executive Order 14037, August 5, 2021, https://www.federalregister.gov/documents/2021/08/10/2021-17121/strengthening-american-leadership-in-clean-cars-and-trucks (accessed February 5, 2025); Joseph Biden, "Catalyzing Clean Energy Industries and Jobs Through Federal Sustainability," Executive Order 14057, December 8, 2021, https://www.federalregister.gov/documents/2021/12/13/2021-27114/catalyzing-clean-energy-industries-and-jobs-through-federal-sustainability (February 5, 2025); Joseph Biden, "Implementation of the Energy and Infrastructure Provisions of the Inflation Reduction Act of 2022," Executive Order 14082, September 12, 2022, https://www.federalregister.gov/documents/2022/09/16/2022-20210/implementation-of-the-energy-and-infrastructure-provisions-of-the-inflation-reduction-act-of-2022 (accessed February 5, 2025); Joseph Biden, "Withdrawal of Certain Areas off the United States Arctic Coast of the Outer Continental Shelf from Oil or Gas Leasing," Presidential Memorandum, March 13, 2023, https://www.presidency.ucsb.edu/documents/memorandum-withdrawal-certain-areas-off-the-united-states-arctic-coast-the-outer (accessed February 5, 2025); Joseph Biden, "Revitalizing Our Nation's Commitment to Environmental Justice for All," Executive Order 14096, April 21, 2023, https://www.federalregister.gov/documents/2023/04/26/2023-08955/revitalizing-our-nations-commitment-to-environmental-justice-for-all (accessed February 5, 2025); and Joseph Biden, "Withdrawal of Certain Areas of the United States Outer Continental Shelf from Oil or Natural Gas Leasing," Presidential Memorandum, January 6, 2025, https://www.federalregister.gov/documents/2025/01/17/2025-01464/withdrawal-of-certain-areas-of-the-united-states-outer-continental-shelf-from-oil-and-natural-gas (accessed February 5, 2025).

33. See Donald Trump, "Declaring a National Energy Emergency," Executive Order 14156, January 20, 2025, https://www.whitehouse.gov/presidential-actions/2025/01/declaring-a-national-energy-emergency/ (accessed February 5, 2025); Donald Trump, "Unleashing American Energy," Executive Order 14096, January 20, 2025, https://www.whitehouse.gov/presidential-actions/2025/01/unleashing-american-energy/ (accessed February 5, 2025); Donald Trump, "Putting America First in International Environmental Agreements," Executive Order 14162, January 20, 2025, https://www.whitehouse.gov/presidential-actions/2025/01/putting-america-first-in-international-environmental-agreements/ (accessed February 5, 2025); and Donald Trump, "Unleashing Alaska's Extraordinary Resource Potential," Executive Order 14153, January 20, 2025, https://www.whitehouse.gov/presidential-actions/2025/01/unleashing-alaskas-extraordinary-resource-potential/ (accessed February 5, 2025).

34. Tax Cuts and Jobs Act, Public Law No. 115–97.

35. The primary system is called the Modified Accelerated Cost Recovery System (MACRS) although, since 1986, the emphasis should be on the word "modified" rather than "accelerated." Under the MACRS, most industrial equipment must be deducted over a seven- to 10-year period, and in some cases 15 or 20 years. Industrial structures generally must be deducted over a 39-year period.

36. U.S. Department of the Treasury, Internal Revenue Service, "How to Depreciate Property, 2023," Publication 946, https://www.irs.gov/pub/irs-pdf/p946.pdf (accessed February 5, 2025).

37. Cristina Enache, "Capital Cost Recovery across the OECD, 2023," Tax Foundation *Fiscal Fact* No. 809, April 4, 2023, https://files.taxfoundation.org/20230406113505/Capital-Cost-Recovery-Across-the-OECD-2023-Update.pdf (accessed February 5, 2025).

38. For a discussion of the pre-2017 rules, see Kyle Pomerleau, "Capital Cost Recovery Across the OECD," Tax Foundation *Fiscal Fact* No. 402, November 19, 2013, https://taxfoundation.org/data/all/federal/capital-cost-recovery-across-oecd/ (accessed February 5, 2025). In 2012, the U.S. ranked 25th overall and 26th for industrial buildings out of 34 OECD members.

39. In more formal terms, the present discounted value of the deductions declines as the recovery period lengthens (i.e., the wait is longer) and the interest rate used to discount the deductions increases. $Z = \Sigma\ \delta n\ /\ (1+r)\ n$, where Z is the present value of the capital cost recovery deductions, δn is the depreciation allowance in year n, and r is the discount rate.

40. For the basic user cost of capital analysis with taxes, see Robert E. Hall and Dale W. Jorgenson, "Tax Policy and Investment Behavior," *American Economic Review*, Vol. 57, No. 3 (June 1967), pp. 391–414, https://web.stanford.edu/~rehall/Tax-Policy-AER-June-1967.pdf (accessed February 5, 2025), and Huaqun Li and Kyle Pomerleau, "Measuring Marginal Effective Tax Rates on Capital Income Under Current Law," Tax Foundation *Fiscal Fact* No. 687, Tax Foundation, January 2020, https://files.taxfoundation.org/20200115104709/Measuring-Marginal-Effective-Tax-Rates-on-Capital-Income-Under-Current-Law.pdf (accessed February 5, 2025). See also Kevin A. Hassett and Kathryn Newmark, "Taxation and Business Behavior: A Review of the Recent Literature," in John W. Diamond and George R. Zodrow, eds., *Fundamental Tax Reform: Issues, Choices, and Implications* (Cambridge: MIT Press, 2008), and Alan J. Auerbach, "Taxation and Capital Spending," University of California, Berkeley, and National Bureau of Economic Research, September 2005, http://eml.berkeley.edu//~auerbach/capitalspending.pdf (accessed February 5, 2025). The current tax system is not neutral toward investment. This neutrality criterion is sometimes expressed as ensuring that the private rate of return equals the social rate of return, that the tax system does not raise the user cost of capital, that all factor incomes are taxed once and equally, that the tax system defines income properly, or that the tax is a consumption tax.

41. See, for example, Alex Durante, "Reviewing Recent Evidence of the Effect of Taxes on Economic Growth," Tax Foundation, May 21, 2021, https://taxfoundation.org/research/all/federal/reviewing-recent-evidence-effect-taxes-economic-growth/ (accessed February 5, 2025), and William McBride, "What Is the Evidence on Taxes and Growth?" Tax Foundation *Special Report* No. 207, December 18, 2012, https://taxfoundation.org/research/all/federal/what-evidence-taxes-and-growth/ (accessed February 5, 2025).

42. Joint Committee on Taxation, "General Explanation of Public Law 115–97 (JCS–1–18)," December 2018, pp. 104–107, https://www.jct.gov/getattachment/7c87c9f5-1cb8-4202-a1ca-b608a04c741b/s-1-18-5152.pdf (accessed February 5, 2025). Note that due to inflation adjustments, the section 179 expensing limit is $1.22 million in 2024.
43. Ibid., pp. 115–128.
44. The bonus depreciation or expensing amounts are phased-out as follows: 80 percent for property placed in service in 2023, 60 percent for property placed in service in 2024, 40 percent for property placed in service in 2025, and 20 percent for property placed in service in 2026. After 2026, bonus depreciation will no longer be allowed unless Congress extends it. See also Preston Brashers, "Good Deal, Bad Deal: The 2017 Tax Law vs. the 2024 Tax-Welfare Bill," Heritage Foundation *Backgrounder* No. 3819, March 4, 2024, https://www.heritage.org/sites/default/files/2024-03/BG3819.pdf.
45. See, for example, Gabriel Chodorow-Reich et al., "Tax Policy and Investment in a Global Economy," National Bureau of Economic Research *Working Paper* No. 32180, March 2024, http://www.nber.org/papers/w32180 (accessed February 5, 2025) ("Overall, we estimate a long-run increase in domestic corporate capital of roughly 7.2% due to the TCJA's corporate provisions.").
46. Adam N. Michel, "Expensing and the Taxation of Capital Investment," Cato Institute *Briefing Paper* No. 159, June 7, 2023, https://www.cato.org/sites/cato.org/files/2023-06/BP159.pdf (accessed February 5, 2025); Scott Hodge, "Empirical Evidence Shows Expensing Leads to More Investment and Higher Employment," Tax Foundation, May 19, 2020, https://taxfoundation.org/blog/expensing-leads-to-more-investment-and-higher-employment/ (accessed February 5, 2025); Stephen J. Entin, "Expensing of Machinery and Equipment Should Be Made Permanent," May 30, 2023, https://taxfoundation.org/blog/permanent-expensing-machinery-equipment/ (accessed February 5, 2025); and Tyler Parks and Paige Hanson, "Expensing for Manufacturers," Tax Foundation, September 2024, https://taxfoundation.org/wp-content/uploads/2024/09/How_expensing_benefits_manufacturers.pdf (accessed February 5, 2025).
47. At a minimum, Congress should place all structures used in manufacturing, mining, energy production, construction, and agriculture in the five-year MACRS recovery period class. Asset classes 15.0, 22.1, 22.3, 22.4, 23.0, 24.1, 24.3, 28.0, 33.21, 36.0, 36.1, and 37.33 are currently in the five-year recovery period class. Internal Revenue Service, Publication 946, Table B-2, Table of Class Lives and Recovery Periods, https://www.irs.gov/publications/p946 (accessed March 3, 2025).
48. See, for example, Asa Johansson et al., "Tax and Economic Growth," Organization for Economic Co-operation and Development Economics Department *Working Paper* No. 620, July 11, 2008, https://www.oecd.org/tax/tax-policy/41000592.pdf (accessed February 5, 2025) ("Corporate taxes are found to be most harmful for growth."); Alex M. Brill and Kevin A. Hassett, "Revenue-Maximizing Corporate Income Taxes: The Laffer Curve in OECD Countries," American Enterprise Institute *Working Paper* No. 137, July 31, 2007, https://www.aei.org/wp-content/uploads/2011/10/20070731_Corplaffer7_31_07.pdf (accessed February 5, 2025) ("We also find that the revenue maximizing corporate tax rate was about 34 percent in the late 1980s, and that this rate has declined steadily to about 26 percent for the most recent period."); and Adam Michel, "The High Price That American Workers Pay for Corporate Taxes," Heritage Foundation *Backgrounder* No. 3243, September 11, 2017, https://www.heritage.org/sites/default/files/2017-09/BG3243_0.pdf.
49. In the economics literature, this question is often phrased as "What is the incidence of the corporate income tax?"
50. The Joint Committee on Taxation staff and the U.S. Treasury Department assume that shareholders bear most of the burden of the corporate tax.
51. The non-corporate sector can be affected because competition will *eventually* cause wages, prices, and after-tax returns in the corporate and non-corporate sectors to be the same. For a more detailed explanation, see Arnold C. Harberger, "The Incidence of the Corporation Income Tax," *Journal of Political Economy*, Vol. 70, No. 3 (June 1962), pp. 215–240.
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the Corporate Income Tax," U.S. Department of the Treasury, Office of Tax Analysis, December 2007, https://home.treasury.gov/system/files/131/wp-101.pdf (accessed February 5, 2025); and Stephen J. Entin, "Tax Incidence, Tax Burden, and Tax Shifting: Who Really Pays The Tax?" Heritage Foundation *Center for Data Analysis Report* No. 04–12, November 5, 2004, https://www.heritage.org/taxes/report/tax-incidence-tax-burden-and-tax-shifting-who-really-pays-the-tax (accessed February 5, 2025).

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64. Internal Revenue Code § 163(j)(8) defines adjusted taxable.
65. Assuming the company has any depreciable property or amortization. Most companies do. Otherwise, they would be the same.
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86. 42 U.S. Code § 4370m–1(c)(1)(B).
87. Originally enacted by Internal Revenue Service Restructuring and Reform Act of 1998, Public Law 105–206, § 3001 ("If, in any court proceeding, a taxpayer introduces credible evidence with respect to any factual issue relevant to ascertaining the liability of the taxpayer for any tax imposed by subtitle A or B, the Secretary shall have the burden of proof with respect to such issue.").
88. For example, 28 U.S. Code § 171 and 26 U.S. Code § 7441 declare that United States Court of Federal Claims and the United States Tax Court, respectively, are Article I courts. Bankruptcy Courts are a "unit" of U.S. District Courts, 28 U.S. Code § 151, but considered to be Article I courts.
89. The Commerce Court was created by the Mann–Elkins Act of 1910. It was abolished in 1913. For background information, see J. Newton Baker, "The Commerce Court. Its Origin, Its Powers and Its Judges," *Yale Law Journal*, Vol. 20, No. 7 (May 1911), pp. 555–562.
90. 28 U.S. Code § 251.
91. *United States v. Muhtorov*, 20 F.4th 558, 606–18 (10th Cir. 2021). The never-used United States Alien Terrorist Removal Court is also an Article III court. See 8 U.S. Code § 1532.
92. 5 U.S.C. § 702.
93. The scope of the review is governed by 5 U.S. Code § 706.

94. This should probably be accomplished by both amending the National Environmental Policy Act and by amending the APA with respect to matters within the jurisdiction of the Permitting Court.
95. See Mario Loyola, "Unleashing America's Energy Abundance: Permitting Reform Is Vital for Affordable Clean Energy," Competitive Enterprise Institute *OnPoint* No. 283, September 27, 2022, https://cei.org/wp-content/uploads/2022/09/Mario_Loyola_-_Unleashing_America_s_Energy_Abundance.pdf (accessed February 5, 2025).
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97. 42 U.S. Code § 7604.
98. 42 U.S. Code § 8435.
99. 42 U.S. Code § 4911.
100. 43 U.S. Code § 1349.
101. 42 U.S. Code § 9659.
102. 33 U.S. Code § 1365.
103. 42 U.S. Code § 6305.
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110. Sixty days after the amendment was proposed, for example.
111. 29 U.S. Code § 652(9).
112. 29 U.S. Code § 414 currently provides that the union must provide a copy of each collective bargaining agreement made by such labor organization with any employer to any employee who requests such a copy but has no provisions regarding tentative (or proposed) agreements or timing.
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